

the insulating protective layer of the flexible wire board is extended inside the display panel while having the flexible wire board connected to the display panel.

18. (new) A display module which includes a display provided with external connection terminals and a flexible wire board having a wire pattern on a base material, terminals of the wire pattern of the flexible wire board and the external connection terminals of the display panel being bonded using an anisotropic conductive adhesive, the flexible wire board having an insulating protective layer for protecting the wire pattern, wherein:

at least a part of an end portion of the insulating protective layer of the flexible wire board is extended inside the display panel while having the flexible wire board connected to the display panel, the end portion being that of an external connection terminal side.

REMARKS

Claims 1-9 and 11-18 are pending in this application. Claims 1, 11, 12, 17 and 18 are independent claims. By this amendment, claims 1, 11 and 12 are amended, claim 10 is canceled and new claims 17 and 18 are added. Reconsideration in view of the above amendments and following remarks is respectfully solicited.

The Claims Define Patentable Subject Matter

The office action recites the following rejections: (1) claims 1, 10-12, 14 and 16 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,172,730 to Fujita (hereafter Fujita); and (2) claims 1-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,211,936 to Nakamura in view of Fujita. In addition, claim 11 is rejected under 35 U.S.C. §112, 2nd Paragraph and the Title is objected to.

These rejections and objection are respectfully traversed.

Applicants respectfully submit that Fujita, either alone or in combination with Nakamura, fails to teach or suggest each and every feature as set forth in the claimed invention.

One aspect of the present invention is to provide a display module and the like whereby, in a flexible wire board, a short circuit in a wire pattern can be prevented, and a break in the wire pattern when bent can be suppressed. Thus, a superior reliability can be realized. In order to attain the foregoing object, the display module of the present invention includes the following features: "the insulating protective layer of the flexible wire board is extended inside the display panel only through two sides in a width direction of the flexible wire board while having the flexible wire board connected to the display panel."

In contrast to the present invention, Fujita fails to disclose the arrangement in which the insulating protective layer of the flexible wire pattern is extended inside the display panel only through two sides in a width direction of the flexible wire board. With the claimed arrangement, the occurrence of a break in the wire pattern is efficiently suppressed.

According to MPEP §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art

reference." *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claims." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicants respectfully submit that the Office Action has failed to establish the required *prima facie* case of anticipation because the cited reference, Fujita, fails to teach or suggest each and every feature as set forth in the claimed invention.

Applicants respectfully submit that independent claims 1, 11 and 12 are allowable over Fujita for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 10-12, 14 and 16 under 35 U.S.C. §102(b) is respectfully solicited.

Applicants also respectfully submit that Nakamura fails to make up for the deficiencies found in Fujita.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior

art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicants respectfully submit that the combination of Nakamura and Fujita fails to teach or suggest each and every feature as set forth in the claimed invention.

Like Fujita, Nakamura fails to teach or suggest the arrangement in which the insulating protective layer of the flexible wire pattern is extended inside the display panel only through two sides in a width direction of the flexible wire board. Specifically, Nakamura merely discloses a display panel provided with first and second electrode substrates 11 and 12 disposed opposite each other. Connecting terminals 15 are disposed at an edge portion of Nakamura's substrate 11. (see Nakamura, col. 3, lines 27-41). However, Nakamura fails to disclose the protective film 4 being extended inside the display panel. Nakamura's protective film 4 only extends outside the display panel.

Applicants respectfully submit that not only does the references fail to teach or suggest each and every feature as set forth in the claimed invention, but that one of ordinary skill in the art would not have been motivated to combine/modify the teachings of Fujita with Nakamura because there is no teaching or suggestion in any of the references regarding how or why one would modify such systems to arrive at the claimed invention.

Applicants respectfully submit that independent claims 1, 11 and 12 are allowable over the combination of Nakamura and Fujita for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1-16 under 35 U.S.C. §103(a) is respectfully requested.

As for new claim 17, by using a COF as the flexible wire board, it is possible to make the base material as thin as 25 μ m to 40 μ m. In other words, the thickness of the base material can be thinner than the thickness (75 μ m) of a case in which the flexible wire board is a TCP. Therefore, a flexible wire board subject to COF mounting is more flexible and easy to bend than a flexible wire board subject to TCP mounting.

Thus, by using a flexible wire board subject to COF mounting, it is possible to extend the insulating protective layer of the flexible wire board inside the display panel (i.e., more inner than the chamfered portion), without jutting out the lower glass substrate. Therefore, without jutting out the lower glass substrate of the liquid crystal display panel, it is possible to provide a display module and the like whereby, in a flexible wire board, a short circuit in a wire pattern is prevented, and a break in the wire pattern when bent is suppressed, producing superior reliability.

In contrast to the present invention, Fujita fails to disclose or even suggests the use of a flexible wire board subject to COF mounting. In Fujita, the glass substrate is jugged out only in order to join the flexible wire substrate thereto.

As for new claim 18, the element "at least a part of an end portion of the insulating protective layer of the flexible wire board is extended inside the display panel" is added to the claims. Support for this feature can at least be found in the specification, on page 33, line 22 to page 35, line 21 and applicants' Fig. 9. Both Fujita and Nakamura are completely silent about the forgoing arrangement.

Conclusion

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a Personal Interview.**

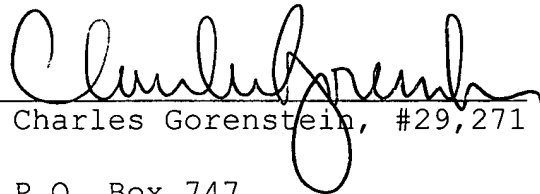
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. \$1.16 or under 37 C.F.R. \$1.17; particularly, the extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASH & BIRCH, LLP

By



Charles Gorenstein, #29,271

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

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CG/CTB/mpe
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